217-2

The Journal of Comparative Neurology

FOUNDED BY C.L. HERRICK, 1891
A WISTAR INSTITUTE PRESS JOURNAL PUBLISHED BY ALAN R. LISS, INC.

EDITORIAL BOARD
SANFORD L. PALAY, *Editor-in-Chief*
Harvard Medical School

MILTON W. BRIGHTMAN
National Institutes of Health
VICTORIA CHAN-PALAY
Harvard Medical School
W. MAXWELL COWAN
Salk Institute
FORD F. EBNER
Brown University
THOMAS FINGER
University of Colorado
Medical School
MICHAEL D. GERSHON
Columbia University
ANN M. GRAYBIEL
Massachusetts Institute of Technology
R.W. GUILLERY
University of Chicago
JON H. KAAS
Vanderbilt University
HARVEY J. KARTEN
State University of New York
Stony Brook
STEPHEN T. KITAI
Michigan State University
LAWRENCE KRUGER
University of California
Los Angeles
RAYMOND J. LASEK
Case Western Reserve University
HAJIME MANNEN
Tokyo Medical and Dental University
GEORGE F. MARTIN
Ohio State University
ROBERT Y. MOORE
State University of New York
Stony Brook
ENRICO MUGNAINI
University of Connecticut
WALLE J. H. NAUTA
Massachusetts Institute of Technology
R. GLENN NORTHCUTT
University of Michigan
ALAN PETERS
Boston University
VIRGINIA M. PICKEL
Cornell Medical Center
PASKO RAKIC
Yale University
HENRY J. RALSTON III
University of California
San Francisco
CONSTANTINO SOTELO
Centre Médico-Chirurgical Foch
Paris
JEROME SUTIN
Emory University
GEORGE SZÉKELY
Institute of Anatomy
Debrecen

VOLUME 216
May 1–June 1, 1983

COPYRIGHT © 1983 BY
ALAN R. LISS, INC.
All rights reserved

VOL. 216 MAY 1, 1983 NO. 1

CONTENTS

J. YGGE AND G. GRANT
The Organization of the Thoracic Spinal Nerve Projection in the Rat Dorsal Horn Demonstrated With Transganglionic Transport of Horseradish Peroxidase 1

MARJORIE D. SHAW AND ROBERT BAKER
The Locations of Stapedius and Tensor Tympani Motoneurons in the Cat 10

SALLY A. MOODY AND MARIETA B. HEATON
Ultrastructural Observations of the Migration and Early Development of Trigeminal Motoneurons in Chick Embryos 20

I. NADELHAFT, J. ROPPOLO, C. MORGAN, AND W.C. DE GROAT
Parasympathetic Preganglionic Neurons and Visceral Primary Afferents in Monkey Sacral Spinal Cord Revealed Following Application of Horseradish Peroxidase to Pelvic Nerve 36

DAVID M. ARMSTRONG, CLIFFORD B. SAPER, ALLAN I. LEVEY, BRUCE H. WAINER, AND ROBERT D. TERRY
Distribution of Cholinergic Neurons in Rat Brain: Demonstrated by the Immunocytochemical Localization of Choline Acetyltransferase 53

LEWIS B. HABERLY AND SHERRY L. FEIG
Structure of the Piriform Cortex of the Opossum. II. Fine Structure of Cell Bodies and Neuropil 69

J.A. ROBSON
The Morphology of Corticofugal Axons to the Dorsal Lateral Geniculate Nucleus in the Cat 89

DAVID G. SPERRY AND PAUL GROBSTEIN
Postmetamorphic Changes in the Lumbar Lateral Motor Column in Relation to Muscle Growth in the Toad, *Bufo americanus* 104

VOL. 216 MAY 10, 1983 NO. 2

CONTENTS

TAKESHI MURAKAMI, YASUHIRO MORITA, AND HIRONOBU ITO
Extrinsic and Intrinsic Fiber Connections of the Telencephalon in a Teleost, *Sebastiscus marmoratus* 115

GEORGE RING AND DONALD GANCHROW
Projections of Nucleus Caudalis and Spinal Cord to Brainstem and Diencephalon in the Hedgehog (*Erinaceus europaeus* and *Paraechinus aethiopicus*): A Degeneration Study 132

JEAN JACOBY AND KALMAN RUBINSON
The Acoustic and Lateral Line Nuclei are Distinct in the Premetamorphic Frog, *Rana catesbeiana* 152

DAVID C. KUO, IRVING NADELHAFT, TADASHI HISAMITSU, AND WILLIAM C. DE GROAT
Segmental Distribution and Central Projections of Renal Afferent Fibers in the Cat Studied by Transganglionic Transport of Horseradish Peroxidase 162

DENNIS M. DACEY AND PHILIP S. ULINSKI
Nucleus Rotundus in a Snake, *Thamnophis sirtalis:* An Analysis of a Nonretinotopic Projection 175

BRENT A. VOGT AND MICHAEL W. MILLER
Cortical Connections Between Rat Cingulate Cortex and Visual, Motor, and Postsubicular Cortices 192

L.D. BEAZLEY AND S.A. DUNLOP
The Evolution of an Area Centralis and Visual Streak in the Marsupial *Setonix brachyurus* 211

VOL. 216 MAY 20, 1983 NO. 3

CONTENTS

TETSU HAYAKAWA AND KATUYA ZYO
Comparative Cytoarchitectonic Study of Gudden's Tegmental Nuclei in Some Mammals 233

MARIETA B. HEATON AND DENISE B. WAYNE
Patterns of Extraocular Innervation by the Oculomotor Complex in the Chick 245

MALCOLM ZARETSKY AND WERNER LOHER
Anatomy and Electrophysiology of Individual Neurosecretory Cells of an Insect Brain 253

MARLA B. LUSKIN AND JOSEPH L. PRICE
The Topographic Organization of Associational Fibers of the Olfactory System in the Rat, Including Centrifugal Fibers to the Olfactory Bulb 264

MARLA B. LUSKIN AND JOSEPH L. PRICE
The Laminar Distribution of Intracortical Fibers Originating in the Olfactory Cortex of the Rat 292

KATHLEEN S. ROCKLAND AND JENNIFER S. LUND
Intrinsic Laminar Lattice Connections in Primate Visual Cortex 303

KUNIKO UCHIDA, NOBORU MIZUNO, TETSUO SUGIMOTO, KAZUO ITOH, AND MOTOI KUDO
Direct Projections From the Cerebellar Nuclei to the Superior Colliculus in the Rabbit: An HRP Study 319

C.C. BELL, S. LIBOUBAN, AND T. SZABO
Pathways of the Electric Organ Discharge Command and Its Corollary Discharges in Mormyrid Fish 327

MICHAEL E. LEWIS, AGU PERT, CANDACE B. PERT, AND MILES HERKENHAM
Opiate Receptor Localization in Rat Cerebral Cortex 339

VOL. 216 JUNE 1, 1983 NO. 4

CONTENTS

P. WITKOVSKY, W.G. OWEN, AND M. WOODWORTH
Gap Junctions Among the Perikarya, Dendrites, and Axon Terminals of the Luminosity-Type Horizontal Cell of the Turtle Retina 359

EDMUND A. ARBAS
Neural Correlates of Flight Loss in a Mexican Grasshopper, *Barytettix psolus.* I. Motor and Sensory Cells 369

EDMUND A. ARBAS
Neural Correlates of Flight Loss in a Mexican Grasshopper, *Barytettix psolus.* II. DCMD and TCG Interneurons 381

K. KULTAS-ILINSKY, I. ILINSKY, S. WARTON, AND K.R. SMITH
Fine Structure of Nigral and Pallidal Afferents in the Thalamus: An EM Autoradiography Study in the Cat 390

ALBERTO ALBANESE AND DIEGO MINCIACCHI
Organization of the Ascending Projections From the Ventral Tegmental Area: A Multiple Fluorescent Retrograde Tracer Study in the Rat 406

DICK R. NÄSSEL, GAD GEIGER, AND HARJIT S. SEYAN
Differentiation of Fly Visual Interneurons After Laser Ablation of Their Central Targets Early in Development 421

CARL B. WATT AND GREGORY A. MIHAILOFF
The Cerebellopontine System in the Rat. II. Electron Microscopic Studies 429

IRMGARD E. SCHWARZ AND DIETRICH W.F. SCHWARZ
The Primary Vestibular Projection to the Cerebellar Cortex in the Pigeon *(Columba livia)* 438

JAMES W. TRUMAN
Programmed Cell Death in the Nervous System of an Adult Insect 445

C.H. TABAN AND M. CATHIENI
Distribution of Substance P-Like Immunoreactivity in the Brain of the Newt *(Triturus cristatus)* 453

Index 471